

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF DELAWARE

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IN THE MATTER OF THE APPLICATION OF)
DELMARVA POWER & LIGHT COMPANY)
TO IMPLEMENT AN ADVANCED METERING)
ENABLED DYNAMIC PRICING PLAN)
(OPENED MARCH 22, 2011))

PSC Docket No. 09-311

FINAL FINDINGS, OPINION AND ORDER NO. 8105

BEFORE COMMISSIONERS:

JOANN T. CONAWAY, Acting Chair
JAYMES B. LESTER, Commissioner
J. DALLAS WINSLOW, Commissioner
JEFFREY J. CLARK, Commissioner

APPEARANCES:

ON BEHALF OF THE APPLICANT, DELMARVA POWER & LIGHT COMPANY
("DELMARVA"):

TODD L. GOODMAN, ESQ.
Associate General Counsel

ON BEHALF OF THE DELAWARE PUBLIC SERVICE COMMISSION STAFF
("STAFF"):

REGINA A. IORII, ESQ.
Deputy Attorney General
Delaware Department of Justice

JANIS L. DILLARD
Deputy Executive Director

PATRICIA A. GANNON
Public Utilities Analyst

ON BEHALF OF THE DIVISION OF THE PUBLIC ADVOCATE ("DPA"):

KENT WALKER, ESQ.
Deputy Attorney General
Delaware Department of Justice

MICHAEL DAMIEN SHEEHY
Public Advocate

I. PROCEDURAL BACKGROUND¹

1. On December 20, 2011, the Delaware Public Service Commission (the "Commission") conducted an evidentiary hearing on a proposed settlement (the "Proposed Settlement") proffered by Delmarva, Staff and the DPA to implement dynamic pricing for Delmarva's Standard Offer Service ("SOS") customers. The parties introduced thirteen exhibits into evidence, including the Proposed Settlement. Delmarva proffered oral testimony from Gary R. Stockbridge, President of Delmarva Power; Robert M. Collacchi, Jr., Director of Energy Supply for Pepco Holdings, Inc. ("PHI"); and Stephen L. Sunderhauf, PHI's Manager of Program Design and Evaluation. The DPA presented oral testimony from Public Advocate Michael Damien Sheehy. Staff submitted oral testimony from Deputy Executive Director Janis Dillard and Public Utilities Analyst Patricia A. Gannon. All witnesses were subject to cross-examination by the parties and questioning by us.

2. At the conclusion of the evidentiary hearing, we closed the record, consisting of the thirteen exhibits and a 73-page transcript. We then deliberated in open session and voted unanimously to approve the Proposed Settlement. See Order No. 8094. We stated in that Order that we would enter a formal Findings, Opinion and Order at a later date. This is our final Findings, Opinion and Order.

¹ We described the procedural background of this docket at length in Order No. 8094 dated December 20, 2011. In the interest of brevity, we will recite in this Order only that background necessary to bring the procedural background current.

II. DELMARVA'S PREFILED DIRECT AND SUPPLEMENTAL TESTIMONY

3. Delmarva witness Stockbridge was the policy witness supporting Delmarva's application to implement dynamic pricing. He identified several policy reasons driving Delmarva's request. First, he noted that Delmarva and its customers are confronting many energy issues, including high regional prices caused by the capacity-constrained nature of the PJM zone in which Delaware is located. Although this capacity constraint is only approached or exceeded for a few hours a year, it increases prices for all other hours of the year and thus increases prices for Delaware consumers. Second, he testified that Delmarva is "among the national leaders" in deploying Advanced Metering technology ("AMI"), which can encourage Delmarva's customers to control their energy usage with the right incentives. Finally, he observed that federal and state environmental concerns may likely preclude constructing new conventional generation, and intermittent renewable energy sources will become a larger part of the state's electricity portfolio. Delmarva contends that additional demand response ("DR") resources such as dynamic pricing will help address these issues. Ex. 3 at 3.

4. Delmarva noted that the Energy Conservation and Efficiency Act of 2009 (the "ECEE Act") requires it to achieve substantial demand and consumption reductions, and dynamic pricing can significantly contribute to meeting these reductions. Delmarva states that dynamic pricing will give customers more accurate energy price signals and

will provide them with incentives to reduce consumption during times when the cost of producing and supplying energy is highest. *Id.* at 4.

5. Delmarva defines dynamic pricing as charging customers for electricity use based on factors that change over the course of hours or days, such as demand, weather, or the availability of transmission and distribution facilities to transmit or deliver electricity to customers. It states that a goal of dynamic pricing is to create a link between cost and retail pricing so customers will avoid using electricity when it costs more to produce and shift their usage to times when it costs less to produce. Because the meters transmit one hour or 15-minute energy usage increment measurements daily to Delmarva, AMI provides a platform for dynamic pricing by giving Delmarva the ability to measure the amount of electricity customers are using and when they are using it, and provides more timely feedback to customers. *Id.* at 5.

6. Delmarva identified several benefits of reduced energy usage resulting from dynamic pricing. First, participating customers will experience direct savings. Second, it is likely to reduce the average cost of generation for all customers in the region because lower peak demand reduces the number of hours that expensive generation operates and it may postpone construction of additional generation and transmission. Third, decreasing the number of hours that high-emitting plants operate may reduce pollution. Last, lower

peak usage reduces line losses, which further decreases average costs. *Id.* at 6; Ex. 7 at 2, 6-7.

7. Delmarva proposed to implement dynamic pricing in three stages in order to verify billing system calculations, refine internal operational procedures and test customer education materials. Beginning in June 2012, it will transition an initial group of some 6,904 Field Acceptance Test ("FAT") participants² to Rider DP. In June 2013, it will move all residential SOS customers and an initial group of 152 small commercial and 87 medium commercial FAT customers to Rider DP. Finally, in June 2014, it will move the remaining small and medium commercial customers to Rider DP. Ex. 8 at 8. Where possible, it will include employees who are Delaware residents (including executives) in the first phase of customers moved to dynamic pricing, and will encourage them to actively participate in reducing their usage during Critical Peak Events ("Events"). Ex. 4 at 7. Delmarva believes that the experience these employees gain from participation will assist them in understanding and adopting the new business processes, and their participation will provide Delmarva with direct feedback regarding any necessary process improvements. *Id.* at 7-8.

² Between April and July 2009, Delmarva installed 7,146 electric AMI meters, 525 Gas Interface Management Units, ten Access Points and 24 AMI Signal Repeaters in two primary sites in New Castle and Kent Counties. It chose these sites to assess system performance in urban, suburban and rural areas. In July 2009, after installing the equipment and tuning the AMI communications network, Delmarva executed the AMI System Acceptance Testing Process, and in November 2009, it concluded that the FAT results were acceptable. Ex. 4 at 8-11. Delmarva selected the FAT customers for Phase I of dynamic pricing because it has a full year of AMI-related information for them. Tr. at 33.

8. Delmarva witness Joseph F. Janocha, PHI's Manager of Rate Economics, provided the rate design and tariffs for Rider DP. Although previous Delmarva plans had suggested that it would make both Critical Peak Pricing ("CPP") and Critical Peak Rebate ("CPR") plans available, Delmarva proposes only a CPR plan for SOS customers to simplify the required education for both customers and Delmarva employees. Ex. 6 at 2; Ex. 7 at 6. Delmarva states that CPR permits default applicability of Rider DP because it essentially eliminates the possibility of higher bills compared with existing rates. Ex. 7 at 5-6.³

9. Rider DP modifies the SOS generation portion of a customer's bill by specifying CPR as the default pricing structure.⁴ Ex. 6 at 2-3; Ex. 10 at 1-2. Delmarva proposes to apply a credit of \$1.25⁵ for each kWh reduction in usage from a pre-established Customer Base Line ("CBL") usage level during Events. The CBL, which is the hourly average of the customer's usage during similar hours for the three days with the highest peak usage during the prior 30-day period

³ Over time, it is possible that more complex dynamic pricing structures may be introduced. Ex. 7 at 6; Tr. at 36.

⁴ A customer may opt out of Rider DP at any time. Ex. 6 at 2.

⁵ Mr. Janocha's testimony described the derivation of the CPR price. See Ex. 10 at 4 and Updated Sch. JFJ-2. He testified that Delmarva set the credit at \$1.25/kWh rather than the \$1.34/kWh shown in the calculation: (1) to allow for factors that could reduce expected revenues from the PJM Reliability Pricing Model ("RPM") market (which should provide a better opportunity for Delmarva to offset the rebate cost through the PJM auctions into which Delmarva bids the DR resources); and (2) consistency with its other jurisdictions. *Id.* at 4. Delmarva also proposed a \$1.00/kWh floor limitation to ensure customer response even if capacity prices are lower. *Id.* at 5.

(not including weekends, holidays, the day before the Event and Event days themselves), will be calculated for each Event. Ex. 6 at 3-4. All kWh usage will be priced at the normal SOS rate, and customers will not be penalized if they do not reduce their usage from their CBLs during an Event; however, customers will only receive the credit if their actual usage is less than their CBL for that particular Event. *Id.* at 3; Ex. 10 at 2-3. Delmarva will update the CPR price annually in a filing on March 1, which updated price will reflect the most recently available PJM capacity and energy market prices. Ex. 6 at 5.

10. Current Rider EFT SOS customers who are also "FAT" customers may take service under Rider DP beginning in June 2012. Rider EFT customers who are not "FAT" customers, SOS Customers currently taking service under Rate R-TOU-ND and Rider PM may not take service under Rider DP until June 2013. Ex. 10 at 3. Rider EFT customers will receive the full Rider DP credit based on their response to each Event called in 2012 in addition to their EFT credit. Beginning in 2013, if no Events are called or if the total Rider DP rebate is less than the credit generated by their participation in Riders EFT and PM, these customers will receive the difference up to the level of their Riders EFT or PM credits. *Id.* at 3.

11. Events may be called under conditions including (but not limited to) higher than normal PJM day-ahead Locational Marginal Prices ("LMP"), PJM emergencies or local system emergencies. Ex. 5 at 10; Ex. 7 at 7. Each Event will occur between 12 noon and 8 p.m., and

can last a maximum of six hours. Delmarva will attempt to notify customers of an anticipated Event by 8 p.m. of the preceding day by automated phone call, e-mail, text message or some combination thereof at the customer's option, and its customer service and website will also provide Event information. If a customer does not select a notification preference, Delmarva will notify them by phone message using contact numbers from its records. Ex. 5 at 10-11; Ex. 6 at 4.

12. Annually for each rate class, after September 30, Delmarva will compare the amounts billed from May 1 - September 30 against the amounts that would have been billed for the same consumption under standard SOS rates. The evaluation will include emergency Events occurring during other times of the year evaluation. The calculation will also include all resulting PJM DR market earnings and Rider DP credits paid. Delmarva will incorporate any difference into the SOS Procurement Cost Adjustment ("PCA") filed on or about March 31 of the following year. Ex. 6 at 6. To make this true-up feasible, Delmarva's meters will collect data about each participant's Event and non-Event consumption and usage, which will allow it to maintain a total of amounts collected or credited during Event and non-Event periods. *Id.*

13. Delmarva witness Karen R. Lefkowitz, PHI's Vice President - Business Transformation, described the technologies and business processes required for dynamic pricing. Ex. 4 at 2-7. IBM is assisting Delmarva with the systems integration work. She testified that the changes to the back office systems and business processes were

"extensive," and that Delmarva had undertaken a "rigorous systems testing and validation program" to ensure their integrity. *Id.* at 8. These efforts will allow Delmarva to provide customers with timely information on their performance during Events and detailed usage information on their bills, as well as other information about achieving energy savings. *Id.* Delmarva also performed comprehensive testing of the applications, enterprise service bus and interfaces integrating the systems into its billing system. *Id.* at 12.

14. Delmarva witness Charles R. Dickerson provided an overview of Delmarva's education and customer engagement plan for dynamic pricing and discussed industry best practices. He testified that during the first six months of 2012, Delmarva will educate the Phase I customers about dynamic pricing through targeted communications (direct mail, bill inserts and bill messaging) which will encourage them to set their noticed preferences for Events and instruct them how to earn rebates by reducing usage during Events. Ex. 5 at 2-3, 5; Ex. 9 at 2. Delmarva will expand its education efforts in 2013 to all residential customers, using direct communications, mass and social media, service agencies, special interest groups, faith-based organizations and non-English speaking advocacy groups for face-to-face outreach; Delmarva believes this will enable it to more effectively educate customers belonging to distinct marketing segments such as low income, seniors, and ethnic groups. Ex. 5 at 2-3, 5. In 2014, when Delmarva will move all SOS customers to dynamic pricing, it

expects its education methods primarily to include direct mail, direct customer contact and social media. *Id.* at 3. It notes that recent research indicates that usage in households provided with appliance-level usage data was 6% lower than usage in households provided with whole-house data only. *Id.* at 6-7 and n.1. Delmarva will monitor its education efforts for each market segment, and its phased education approach will permit it to refine its education tools and resources before it applies them to the entire customer base. *Id.* at 7.

15. Delmarva is only offering one dynamic pricing plan (CPR) to provide customers with sufficient time to learn about dynamic pricing, particularly how to reduce energy usage during Events, the benefits of participation, and the tools available to assist them. Delmarva believes that a rebate form of dynamic pricing will be more appealing initially to a broader range of customers. *Id.* at 4.

16. Delmarva acknowledges that the success of dynamic pricing depends greatly on accurate billing. Bills will include detailed information on each Event called during the billing cycle and the credit applied based on the rebates earned during those Events. Delmarva will continue to review bills before they are presented to customers, and will monitor other utilities' experience to avoid the problems they have encountered. Delmarva discussed other utilities' education efforts and stated that it plans to incorporate features of those education efforts into its own plan. *Id.* at 4-5, 8-9.

17. Delmarva described PHI's pilot dynamic pricing program in the District of Columbia, which offered all three dynamic pricing options: CPR; Critical Peak Pricing; and Hourly Pricing. It states that the pilot was a "resounding success" in demonstrating how dynamic pricing can reduce peak consumption: customers in all rate classes and economic groups responded to Events and consistently reduced their usage. Its studies showed that 86% of CPR participants would recommend the plan, and all CPR participants with annual incomes below \$25,000 would recommend it to friends and family. The vast majority of customers saved money on the plans. *Id.* at 7-8. The pilot program results suggest that if all SOS customers have the opportunity to try dynamic pricing with the fewest possible barriers to enrollment, a high percentage of them will "appreciate the opportunity." *Id.* at 8.

18. Delmarva discussed how it will measure the success of its education plan. It will conduct ongoing research to ascertain which customers are actively participating as well as perceived barriers to participation. It has already conducted a baseline survey to assess knowledge and interest level in AMI programs, and it will repeat the survey after dynamic pricing commences to measure customers' satisfaction with it. It will also conduct research to test messages and communications to customers to ensure that they resonate with customers and to determine the most effective customer communication channels. Finally, Delmarva is working on a segmentations study, the results of which will help guide its dynamic pricing education and

communications activities. Market Strategies International has assisted Delmarva with these studies and activities. *Id.* at 9-10.

19. Delmarva will provide summaries of the details of customers' response to Events (how much energy they reduced during Events) and the dollar amount of rebates earned on customers' bills and on the "My Account" web portal. Both will use the same terms for ease of comparison. Delmarva will provide information for each Event, and customers will have access on "My Account" to details of past and current bills. Delmarva considers bills to be a key educational method since most customers look at their bills monthly. It will encourage customers to log into "My Account" the day after an Event to receive feedback on how much they reduced and the rebate earned, and more detailed information on their hourly usage. Delmarva will also provide a "bill-to-date" function as of the day before on "My Account;" it states that "bill-to-date" is emerging as an industry best practice. In addition, its customer service representatives will be trained to educate customers about dynamic pricing. *Id.* at 11-13.

20. Delmarva witness Sunderhauf addressed the dynamic pricing program's structure and implementation and summarized the work Delmarva did to quantify its DR benefits. In conjunction with the Brattle Group, Delmarva performed a detailed study of projected energy and demand savings attributable to dynamic pricing in Delaware based on load reduction impacts from available and applicable industry studies. It estimated the residential impacts of dynamic pricing in

Delaware by adapting the Pricing Impact Simulation Model ("PRISM") to the price elasticities obtained through Baltimore Gas & Electric's ("BG&E") dynamic pricing pilot and adjusting those estimates for Delaware-specific load shapes and weather conditions. *Id.* at 3.⁶ It estimated non-residential impacts through the PRISM developed through the elasticities estimated from California's dynamic pricing pilots and also adjusted those results for Delaware-specific load shapes and weather conditions. *Id.* at 4. Its study accounted for expected energy efficiency and conservation savings from SEU programs, which reduce the estimated demand savings that the proposed dynamic pricing program will achieve, and also excluded the automated savings resulting from existing and future utility direct load control programs. *Id.*

21. Delmarva assumed that 75% of the residential and commercial customers defaulted to CPR would be aware of the Dynamic Pricing program and, if they chose, would take action when an Event is called. Based on this assumption, Delmarva expects to reduce peak demand by 111 MW by the year 2025, and intends to monetize this demand reduction through the existing PJM market by bidding it into the PJM Reliability Pricing Model ("RPM") Base Residual Auction ("BRA") and the RPM incremental auctions ("IA") and/or through bilateral agreements. The current high capacity prices in the Delaware region provide a significant financial opportunity for the Dynamic Pricing Program. On

⁶ Delmarva used BG&E's study results rather than those of PEPCO's dynamic pricing pilot because of the greater similarity of residential customer demographics in Delaware and Maryland. Ex. 7 at 3.

the energy side, Delmarva may receive payment for achieved energy reductions through the PJM Emergency and Economic Load Response programs. *Id.* at 4-6.

III. STAFF'S REPORT ON DELMARVA'S DYNAMIC PRICING PROPOSAL

22. After Delmarva filed its application, it met with Staff and the DPA to discuss the dynamic pricing proposal.⁷ Staff and the DPA also propounded written questions to Delmarva regarding the proposal. Ex. 11 at 3.

23. On September 7, 2011, Staff submitted a Report on Delmarva's Dynamic Pricing Proposal.⁸ Staff supported implementing Rider DP for the FAT customers, but did not support implementation for all customers without certain refinements.

24. First, Staff observed that this was the first dynamic pricing program in PHI's service territory that was not a pilot program, and that Delmarva had no experience with Delaware consumers. Staff contended that the Commission should not approve implementation for all SOS customers without complete knowledge of how the FAT customers responded. Thus, Staff asked Delmarva to provide continuing updates and/or to conduct workshops to inform it and the DPA about the

⁷ Interveners from the original dynamic pricing filing in 2009 were invited to attend the first two workshops, but none did. In addition, on August 1, 2011 John Nichols submitted a petition to intervene out of time, which the Hearing Examiner denied on August 4, 2011. Ex. 10 at 3.

⁸ Although the DPA did not submit prefiled testimony or other filing addressing Delmarva's application, the Public Advocate supported Staff's Report and took substantially the same positions as Staff during subsequent meetings.

FAT customers' experience with Rider DP, and only after Staff and the DPA have had the opportunity to examine the information should the Commission consider implementing Rider DP for Delmarva's remaining SOS customers. *Id.* at 5.

25. Second, Staff deemed an "iterative dialogue and information exchange" critical to the program's success, and therefore requested Delmarva to provide monthly reports/status updates to it and the DPA on the following items (but not limited to these items): (1) PJM capacity revenues; (2) PJM energy market payments resulting from DR being called; (3) any penalties assessed against Delmarva for not responding; (4) the ongoing balance of monies paid out to customers versus monies collected from PJM; and (5) the effect of customer migration and changes in customer baselines on dynamic pricing. *Id.*

26. Third, Staff observed that Delmarva faces potentially significant penalties if it overbids DR into the PJM market and fails to realize the amount of DR bid in, or underbids and lacks sufficient revenues from PJM to pay the Rider DP rebates. Staff suggested an 80%/20% sharing of the risk of PJM penalties for failing to respond when DR is called, with Delmarva shouldering 80% of the risk. Staff submitted that a risk sharing mechanism should result in Delmarva considering more carefully how much DR to bid. *Id.* at 5-6.

27. Fourth, Staff believed that the program's automatic enrollment would require further examination in order to avoid customer backlash. *Id.* at 6.

28. Finally, Staff contended that pre-paid metering must be considered to fully optimize AMI capabilities. Pre-paid metering will allow a customer that might otherwise have its electricity disconnected for non-payment to maintain its electric service going forward on a pre-paid basis while it arranges a payment plan, and could be offered to customers who want to better control their electric costs. Pre-paid metering would also assist in reducing Delmarva's current high level of uncollectible accounts. *Id.*

IV. DELMARVA'S RESPONSE TO STAFF'S REPORT

29. With respect to Staff's proposed "stop and review" period, Delmarva proposed to conduct one or more Phase I assessment workshops within 60 days after September 30, 2012 (the end of the Phase I time period) and envisioned filing recommendations on or before December 31, 2012. Delmarva expected dynamic pricing to be implemented for all SOS customers, and considered the assessment period an opportunity to (1) address and correct any issues arising out of the FAT customers' experience; (2) further refine customer education; and (3) further refine and improve the program as a whole. Delmarva required Commission approval of the dynamic pricing program in its entirety by February 29, 2012 to provide the certainty necessary to bid the DR capacity into the PJM reliability pricing model (RPM) BRA, which occurs three years prior to the capacity's delivery date. Delmarva also proposed identifying specific metrics for measurement and analysis during the assessment period, including but not limited to

data on FAT customers' complaints and number of customers opting out. Delmarva stated that it will seek recovery of the costs associated with this assessment. Ex. 12 at 1.

30. Delmarva agreed to provide Staff's requested monthly reports and status updates, but noted that the information requested may change depending on the agreed-upon metrics. Delmarva also noted that it would have to participate in the IA rather than the BRA in 2012, and based on recent trends the IA prices could be lower than BRA prices. *Id.* at 2.

31. Delmarva described how it intended to offer capacity into the PJM market. Ex. 12A. It agreed to meet with Staff and the DPA to discuss: (1) PJM's RPM BRA, IA, bid processes and related business rules; (2) its continued participation and performance in the RPM bid process and its mitigation measures; and (3) its response to any perceived customer risks. Delmarva contended that dynamic pricing was not appropriate for risk sharing. Ex. 12 at 1-3.

32. Delmarva was willing to reconsider the opt-out nature of the dynamic pricing program during the assessment period. Ex. 11 at 2.

33. Finally, Delmarva observed that pre-paid meters were not currently part of its AMI plan; however, it agreed to study how they could be integrated into and coordinated with that plan. It agreed to file semi-annual reports explaining the steps taken and progress made in this regard. It sought input from Staff and the DPA with respect to any pre-paid metering program. *Id.* at 2-3.

34. Delmarva, Staff and the DPA met twice after Staff issued its Report to discuss the issues raised therein. On November 22, 2011, Staff filed a Proposed Settlement on behalf of itself, Delmarva and the DPA. Ex. 13.

V. THE PROPOSED SETTLEMENT

35. The Proposed Settlement provides that dynamic pricing (the "Program") will be implemented in phases for all SOS customers in the manner previously discussed. See *supra* ¶7; Ex. 13 at ¶8a. At the conclusion of Phase I implementation on September 30, 2012, there will be one or more assessment workshops in which the participants will have the opportunity to evaluate the Program and recommend changes or improvements by December 31, 2012. Metrics to be examined in the workshops will include but will not be limited to:

- a. The actual level of FAT customers' participation versus Delmarva's expectations;
- b. Monies paid out to FAT customers versus monies available for payment;
- c. Customers' reactions to the Program, including number of complaints and number of customers opting out;
- d. Customer education materials;
- e. Adjustments to the tariff rebate rate; and
- f. Whether the Program should be opt-in or opt-out.

Ex. 13 at ¶8b. Delmarva may fully recover the reasonable costs associated with the assessment workshops and any studies or informational requirements resulting therefrom, subject to Commission approval. *Id.* at ¶8e.

36. Delmarva will work with Staff and the DPA to ensure that the Program operates to their satisfaction. *Id.* at ¶8c. Full Program implementation will incorporate results obtained from Phase I customers, including customer education refinements. *Id.* at ¶8d.

37. Delmarva will bid the Program's DR into the PJM capacity markets on a MW basis. Delmarva is a price taker and will receive the market clearing price for the MWs bid. Delmarva may participate in PJM's BRAs and IAs. Prior to full Program implementation for allocation and receipt of PJM BRA revenues (2012-2014), Delmarva will meet its State-mandated DR goals from direct load control (subject to Commission approval). It will minimize use of the Program for ECEE Act purposes until delivery year 2015-16, but thereafter will use the Program to meet its ECEE Act DR goals. The participants acknowledged that for delivery years 2012-14, Delmarva may not receive sufficient revenues in the PJM IAs to pay for customer response under the Program; in this event, any underrecoveries will carry forward as a regulatory asset into the 2015-2016 delivery years, to be offset by revenues from the BRAs and IAs. Delmarva will regularly monitor DR forecasts to ensure that its bids into the PJM capacity markets are reasonable and will take reasonable action to minimize customer impacts, including buying back MWs in an IA prior to the delivery period if a short position is forecasted. It will monitor total PJM revenues due to it based on BRA and IA results and the timing of PJM revenues versus the timing of rebate payments to customers. Delmarva

will actively manage the Program and make reasonable efforts to avoid significant variances. *Id.* at ¶¶8f-j, l-m, o.

38. The participants will review Delmarva's performance in the 2012-14 IAs, beginning at the end of delivery year 2013-14, and evaluate the accuracy of its forecasted reductions versus actual reductions. Such review and evaluation will continue as needed to determine the accuracy of the forecasted MW reductions and any necessary improvements to the forecasts and the Program. Delmarva will take reasonable steps to minimize cost impacts, maximize possible opportunities, and monitor and manage MW bids as they relate to the Program in the PJM capacity markets. No participant is precluded from recommending or seeking changes in the Program. *Id.* at ¶8k.

39. The Program will only be initiated from May 1 through September 30 and only under the following conditions:

- a. PJM-initiated Events;
- b. A PJM test;
- c. At Delmarva's discretion. For this purpose, Delmarva, Staff and the DPA will develop and submit for approval an algorithm using factors such as weather, amount of available revenues, progress toward state DR goals, energy market prices, system emergencies and projected future PJM Events in the year. If there is an underrecovery despite Delmarva's having followed the algorithm, it shall collect the underrecovery through the PCA. If Delmarva deviates from the algorithm, it will be responsible for any underrecovery. PJM-called Events and PJM and/or Delmarva system emergencies are not considered deviations from the algorithm.

Id. at ¶8n.

40. Delmarva will provide the following information to Staff and the DPA on a monthly or as-needed basis:

- a. PJM capacity revenues;
- b. Any PJM energy market payments resulting from DR being called;
- c. Any deficiency payments (in dollar amounts) assessed against Delmarva for not responding, with the deficiency payments broken down by type of payment;
- d. The ongoing balance of monies paid out to customers versus monies received from PJM;
- e. The effect on the Program of customer migration and CVBL changes;
- f. The number of customers participating in CPR and their Event response levels;
- g. Any new information regarding Delmarva's bidding of the Program's DR into the PJM capacity markets; and
- h. Analysis of the results of the PJM BRAs and IAs, including their effect on monies available to reimburse Program participants.

Additional reporting requirements arising from the assessment workshops may be included as appropriate. Delmarva will support all reasonable Staff requests for additional reports and/or information as it gains more experience with the Program. *Id.* at ¶8p.

41. Last, from the date of Commission approval through the end of 2013, Delmarva will file semi-annual reports detailing the steps taken and progress made in its investigation into and integration of pre-paid metering. Delmarva will consider Staff's and the DPA's input concerning a pre-paid metering program, and will conduct an annual workshop with them to review the reports. *Id.* at ¶8q.

VI. THE EVIDENTIARY HEARING⁹

42. Delmarva witness Stockbridge testified that the Proposed Settlement was in the public interest and would result in just and reasonable rates because it would reduce costs for participating customers directly; decrease costs in the region over time; help Delmarva meet its required ECEE Act demand reductions; and would allow customers to benefit from their investment in AMI. Tr. at 63-64.

43. DPA witness Sheehy likewise testified that the Proposed Settlement would result in just and reasonable rates and was in the public interest. He pointed out that participating customers would begin to start realizing benefits from the AMI technology in which they have invested, and that non-participating customers would not experience any harm by not participating. He also testified that it would give customers greater control over their energy usage, which was important from an economic standpoint. Tr. at 65, 67.

44. Last, Staff witnesses Dillard and Gannon also testified that the Proposed Settlement would result in just and reasonable rates and was in the public interest. Ms. Gannon described the benefits of the Program for participating ratepayers and noted that the Proposed Settlement requires Delmarva to provide substantial information about

⁹ Although we assigned this matter to a Hearing Examiner when we originally opened the docket in 2009, we agreed to consider this matter directly rather than have the participants present it to the Hearing Examiner. As Staff witness Dillard explained, the issues involved in the docket were policy-oriented rather than technical. In addition, Delmarva explained that if the Program was not approved in time for the upcoming PJM auctions, customers would be denied one year's opportunity to save money. (Tr. at 15-16, 44, 47).

the Program results and PJM revenues to Staff and the DPA. Tr. at 69-70. Ms. Dillard acknowledged that the Public Utilities Act encourages resolving matters by stipulation or settlement, and testified that Staff typically supports settlements when they will help avoid significant administrative and hearing costs, especially when they provide a reasonable outcome in light of Staff's filed position. She stated that the Program will allow participating customers to realize benefits from the AMI technology for which they have been (and will continue to be) paying in rates, and that participating customers will directly benefit in the form of lower energy bills. Tr. at 70-71.

VII. DISCUSSION AND OPINION

45. The following discussion supports our conclusion on December 20, 2011 that the Proposed Settlement results in just and reasonable rates and is in the public interest.

46. First, as Staff witness Dillard stated, 26 Del. C. §512(a) directs us to "encourage the resolution of matters ... through the use of stipulations and settlements." This reflects a recognition that stipulations and settlements are in the public interest because they reduce the cost of proceedings before us that are ultimately borne by utility ratepayers in their rates.

47. We have previously supported policies and procedures to encourage customers to use energy more efficiently. For example, in Order No. 7420 (September 16, 2009), we authorized Delmarva to deploy AMI into its electric and natural gas distribution system networks and

permitted it to establish a regulatory asset to cover recovery of and on the appropriate operating costs associated with deploying AMI and demand response equipment. We also directed Delmarva, the DPA, Staff and any other interested parties to convene at collaborative workshops to determine the viability of implementing reasonable demand-side management or DR programs in the near term. Dynamic pricing¹⁰ has been

¹⁰ As described by the Institute for Electric Efficiency:

As a commodity, the price of electricity is subject to the market forces of supply and demand. But, because electricity cannot be stored in large quantities, it has to be generated on demand. To serve demand that varies over time, different generation units with varying efficiencies and fuel sources are used to provide electricity at different times of the day as well as the year. But, at all times, adequate generation capacity must be maintained to serve periods of peak demand. For instance, certain generation units, typically gas combustion turbines, only operate during the one percent of the hours in a year when the demand for electricity is highest; due to their high fuel costs it makes economic sense to dispatch these expensive units only during peak demand hours. These units are kept idle for the rest of the hours of the year at a cost of billions of dollars nationwide. This implies that the real cost of serving customers is highly variable and is much higher during peak demand hours than in other hours of the year.

Despite these characteristics, today's retail tariffs do not account for the time-varying nature of demand and therefore the real cost to serve customers. Retail tariffs mask the real costs to serve a customer; by doing so, one of the main attributes of prices, which are to signal the true scarcity value of electricity, is lost. Customers have no incentive to reduce usage during hours when it is most expensive to serve that usage because they are not directly charged for the high cost of electricity during those hours.

Dynamic pricing overcomes this problem ... by providing price signals that give customers incentives to lower their

advanced as a means for encouraging more efficient electricity use by utility customers, and we directed Delmarva, Staff and the DPA to explore it in this docket. Order No. 7620 (August 4, 2009).

48. We believe that the Program set forth in the Proposed Settlement, coupled with appropriate customer education, will encourage customers to conserve energy, or, if they are doing so, to take additional steps in that regard. Non-participating customers are not harmed in the form of higher supply prices, and participating customers may see a reduction in their energy use, all other things being equal. Aside from this direct benefit, reducing demand on peak days will also reduce the number of hours that expensive generation must operate, thus decreasing the average cost of generation for all customers. This is clearly in the public interest, especially here on the Delmarva Peninsula, where transmission constraints have caused significantly higher LMPs than in other parts of the country. Although this capacity constraint is only approached or exceeded for a few hours a year, it increases prices for all other hours of the year.

49. We are also persuaded that CPR is the appropriate program by which to implement dynamic pricing. While we recognize that implementation of AMI equipment comes at a cost, and that CPP could result in more dramatic demand reductions (thus giving customers a

bills by curtailing peak usage and shifting it to less expensive off-peak periods. ...

IEE Whitepaper, "Moving Toward Utility-Scale Deployment of Dynamic Pricing in Mass Markets," June 2009, at 2.

greater return on that AMI investment), we are also mindful that customers may not react well to CPP if it is implemented initially. We believe that CPR - again coupled with appropriate education - will encourage greater customer participation in the Program. Moreover, should customers prove to respond well to CPR, and/or if Delmarva finds that it is not able to achieve the State-mandated demand reductions with just CPR, Delmarva can determine whether moving to a CPP program, either on an opt-in or opt-out basis, would be appropriate. Tr. at 36-37. As Public Advocate Sheehy put it, however, CPR is the "carrot approach to bringing people on board" Id. at 37.

50. For the foregoing reasons, we approve the Proposed Settlement. (Unanimous).

VIII. ORDER

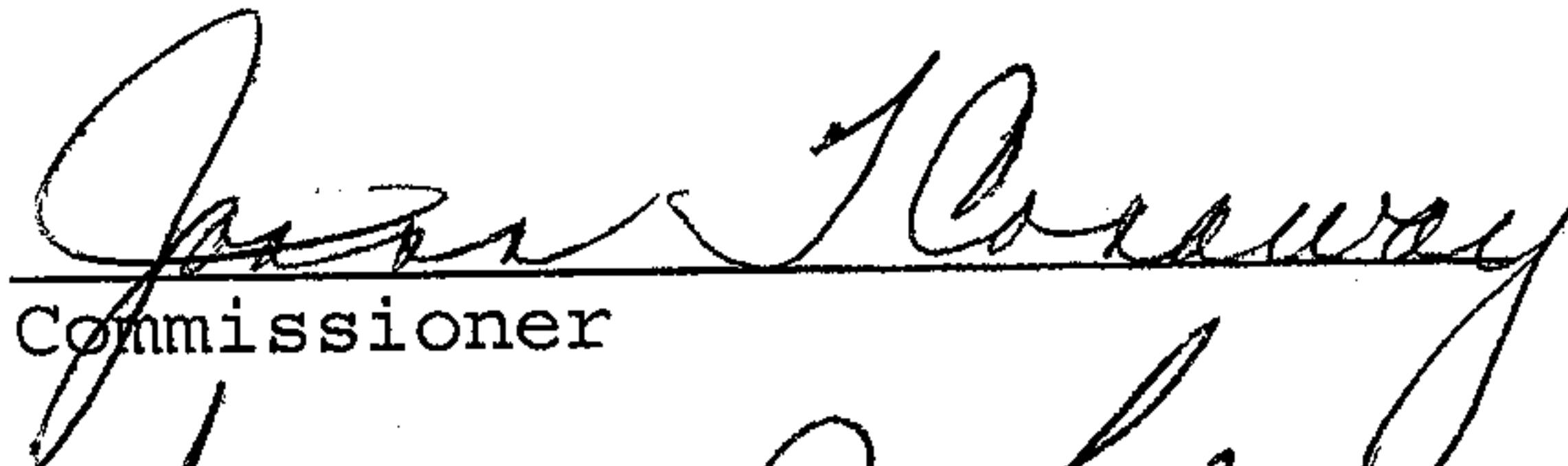
AND NOW, this 31st day of January, 2012, IT IS HEREBY ORDERED BY THE UNANIMOUS VOTE OF THE COMMISSIONERS:

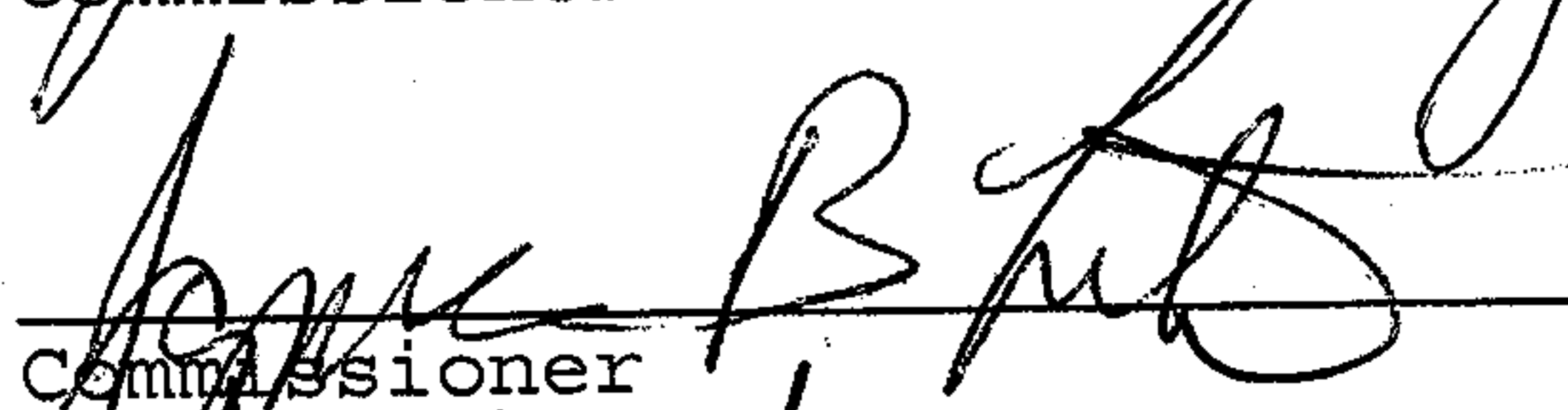
1. That, for the reasons set forth herein, the Proposed Settlement attached hereto as Exhibit A is APPROVED.

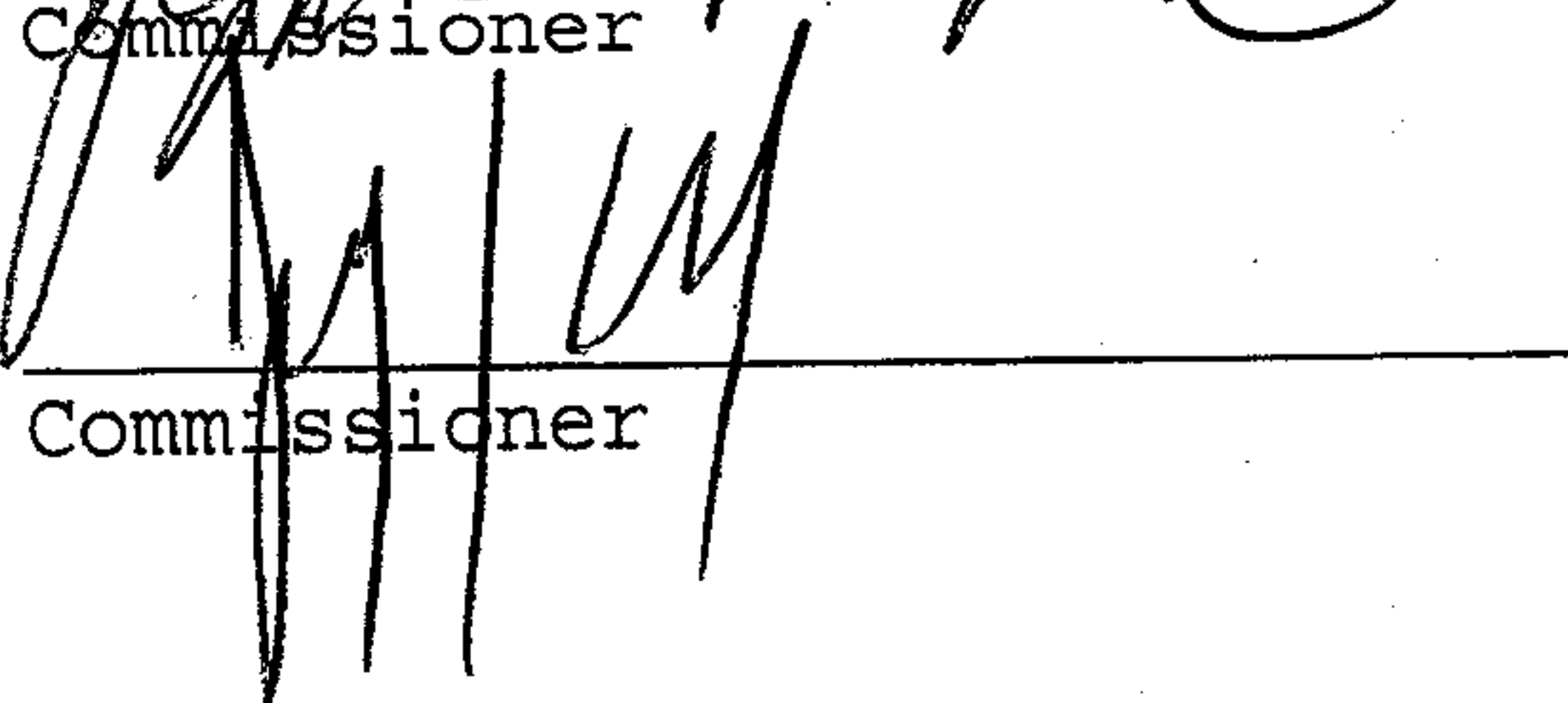
2. That the Commission reserves the jurisdiction and authority to enter such further orders in this Docket as may be necessary or proper.

BY ORDER OF THE COMMISSION:

Chair

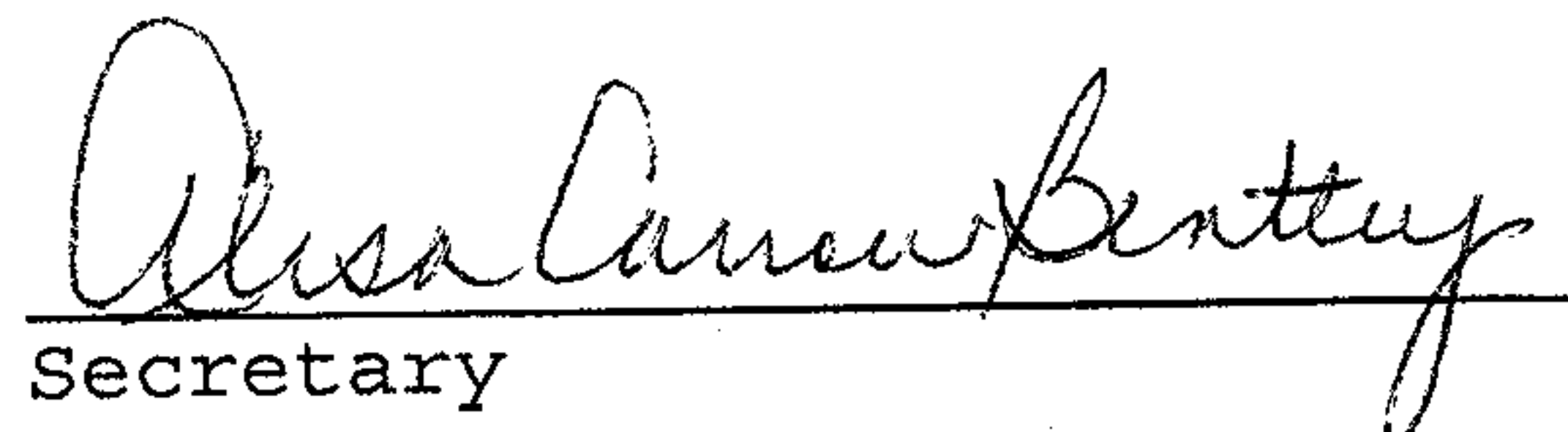

Commissioner


Commissioner


Commissioner

Commissioner

ATTEST:


Secretary

E X H I B I T "A"

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF DELAWARE

IN THE MATTER OF THE APPLICATION OF
DELMARVA POWER & LIGHT COMPANY TO
TO IMPLEMENT AN ADVANCED METERING
ENABLED DYNAMIC PRICING PLAN

)
)
) PSC DOCKET NO. 09-311
)

PROPOSED SETTLEMENT

On this 8th day of December 2011, Delmarva Power & Light Company ("Delmarva" or the "Company"), the Delaware Public Service Commission Staff ("Staff"), and the Division of the Public Advocate ("DPA") (together, the "Parties" or "Settling Parties") hereby propose to settle all issues raised in this proceeding as follows.

I. INTRODUCTION

1. Delmarva's customers, along with the State of Delaware, are currently confronted by increased energy prices due, in large part, to constrained capacity. This capacity constraint, which is approached or exceeded for only a few hours a year, increases prices for all other hours of the year, resulting in higher prices for Delaware consumers. As a result of regulatory approval for the diffusion of Advanced Meter Infrastructure ("AMI") throughout Delmarva's Delaware service territory, Delmarva is among the national leaders in deploying AMI, which has the potential to empower its customers to take greater control over their electricity usage if the correct incentives are provided.

2. Delaware's Energy Conservation & Efficiency Act of 2009 (the "Act") requires significant reductions in both electricity consumption and demand. Dynamic pricing ("Dynamic Pricing") rate options can significantly contribute to meeting this goal. Dynamic Pricing provides

incentives to customers to reduce energy use during peak hours, which saves money directly for participating customers and can serve to generally reduce energy costs for all customers in the region. Peak demand reduction reduces the number of hours that expensive generation must operate, reduces the need for ancillary services, and may defer the need to construct additional expensive peaking plants and transmission facilities. An additional benefit to Dynamic Pricing is a reduction in emissions resulting from decreased energy consumption during peak periods. The Dynamic Pricing structure proposed herein is designed to provide incentives to customers to reduce consumption when the costs of producing and supplying electricity are highest. These resulting energy reductions are one component of Delmarva's efforts to achieve the Act's energy reduction goals.

3. Many customers who actively participate in Dynamic Pricing programs see lower bills compared to standard pricing. Customers who reduce energy during peak periods will often take those same actions to use energy more efficiently overall, resulting in lower emissions and again, lower average costs, all other things being equal.

II. DELMARVA'S DYNAMIC PRICING PROPOSAL

4. On March 22, 2011, Delmarva filed an application to implement a Dynamic Pricing Program (the "Program") for its Standard Offer Supply ("SOS") customers. Delmarva has proposed to implement the Program through a rider ("Rider DP") to its residential and small and medium commercial schedules. Rider DP will modify the SOS Generation portion of the bill by specifying Critical Peak Rebate ("CPR") as the default pricing structure. Under the CPR price structure, customers can earn credits on their bill by reducing their electricity consumption below their pre-established Customer Base Line ("CBL"). One of the benefits of using a CPR versus a critical peak price is that there is no penalty if the customer's usage exceeds its CBL.

5. DPL proposes to implement the Program for the 7,000 residential customers who participated in the AMI Field Acceptance Test ("FAT") which occurred from June through

November 2009. These 6,904 FAT customers will be defaulted to Rider DP in the summer of 2012. The remaining residential customers will be moved to Rider DP in 2013. An estimated 152 small and 87 medium non-residential FAT customers will be placed under Rider DP in 2013. In 2014, the remaining small and medium Delmarva non-residential customers will be defaulted to Rider DP.

6. The Parties exchanged information and engaged in numerous working group sessions, during which Dynamic Pricing issues, including the application of Rider DP, were thoroughly discussed. On September 9, 2011 Staff submitted a report on Delmarva's proposed Program, which outlined five issues requiring further discussion. After Staff submitted its report, the Parties held two workshops to discuss and address Staff's issues.

7. The Parties have reached an agreement on an appropriate path forward. The Parties have established an outline for a collaborative process between Staff, DPA, and the Company to evaluate the Program on an ongoing basis.

III. SETTLEMENT PROVISIONS

8. The Parties to this Settlement DO HEREBY STIPULATE AND AGREE to the following provisions for purposes of a full, final and complete resolution of the issues raised in this proceeding:

- a. The Parties agree that the Program, as set forth in the following paragraphs, should be adopted. The Program will be implemented for all Delmarva SOS customers in phases as set forth in Paragraph 5, *supra*.
- b. At the conclusion of the Phase I CPR effective time period on September 30, 2012, there will be one or more Phase I Assessment Workshops in which the Parties will have the opportunity to evaluate the Program and make any necessary changes or improvements. The Parties will work toward filing a recommendation for proposed changes or improvements by December 31, 2012. The Parties will work to identify specific metrics to be measured and analyzed during the Phase I Assessment period, including but not limited to:
 1. The FAT customers' participation levels – Company expectations versus actual response;

2. Monies paid out to FAT customers versus monies available;
3. Customer reaction to the program, such as number of customer complaints and number of customers opting out;
4. Customer education material;
5. Adjusting the tariff rebate rate if necessary; and
6. Whether the Program should be opt-in or opt-out.

The Parties will hold further discussions regarding opt-in and opt-out options to customers as part of the Phase I Assessment Workshops.

- c. The Company agrees to work together with Staff and DPA to ensure the Program works to the satisfaction of Staff and DPA.
- d. The Program will move forward to full implementation as set forth in Paragraph 5, *supra*, after the Phase I Assessment period and will incorporate results obtained from the application of the Program to the initial 7,000 FAT customers, including but not limited to further refinements in customer education.
- e. Reasonable costs associated with the Phase I Assessment Workshops discussed in subparagraph (b) *supra* and any studies or information requirements resulting from the Phase I Assessment Workshops will be fully recoverable by the Company, subject to Commission review and approval.
- f. The Company will bid the Dynamic Pricing Demand Response program into the PJM capacity markets on a MW basis. The Company is a price taker and will receive the market clearing price for the MWs bid into the auction.
- g. The PJM Capacity Markets in which the Company may participate include the PJM RPM Base Residual Auction ("BRA") and all PJM RPM Incremental Auctions ("IA").
- h. Prior to full implementation for allocation and receipt of PJM BRA revenues (2012 through 2014), the Company will meet its State mandated demand response goals from Direct Load Control (subject to Commission approval) and will minimize its use of the Program until the 2015/2016 delivery year.
- i. The Parties understand that for delivery years 2012, 2013, and 2014 the Company may not receive enough revenues in the PJM IAs to pay for customer response under the Program. The Parties agree that any such under-recoveries will carry forward as a regulatory asset into the 2015, 2016 and 2017 delivery years to be offset by revenues received in the BRA and IA auctions.
- j. The Company will regularly monitor demand response forecasts in an effort to ensure the MW bids submitted into the PJM Capacity Markets are reasonable. To the extent that the actual MW volume of demand response is different than the forecast, the

Company will take reasonable actions to minimize cost impacts to the Program. Such actions could include buying back MWs in an IA prior to the delivery period if a short position is forecasted.

- k. The Parties agree to a review of the Company's performance in the 2013-2014 IAs. This review will begin/occur at the end of the 2013-2014 delivery year and will evaluate the accuracy of the Company's forecasted MW reductions versus the actual program impacts. The Parties will continue this review as needed to determine, based upon final three year results for the auction period, how accurate the forecasted MW reductions were, what improvements to the forecasts can be made, and what improvements to the overall program can be made. The Company will take reasonable steps to minimize possible cost impacts, maximize possible opportunities, and monitor and manage MW bids as it relates to dynamic pricing program in the PJM capacity markets. This proposed settlement does not preclude any Party from recommending or seeking changes to the program.
- l. The Company agrees to monitor the total PJM revenues due to it based on results in the BRA and IAs as well as the timing of such revenues compared to the timing of the rebate payments to customers.
- m. Delmarva will actively manage the Program and make reasonable efforts to avoid significant variances.
- n. ~~The Program will only be initiated under specific conditions from May 1 through September 30:~~
 - (1) Events will be called during PJM initiated events;
 - (2) Events will be called to meet a PJM test if necessary;
 - (3) Events can be called on a discretionary basis. With respect to this subsection, the Company will work with Staff to develop and submit for regulatory approval an algorithm using factors such as: weather, amount of available revenues, progress toward state demand response goals, energy market prices, system emergencies, and projections for future PJM events within the year. If there is an under-recovery despite the Company having followed the algorithm, the Company shall collect the under-recovery through the PCA. If the Company deviates from the algorithm, the Company will be responsible for any under-recovery; and
 - (4) It will not be considered a deviation from the algorithm to call events for PJM and/or Delmarva system emergencies during any time of the year.
- o. The Parties agree that the Program will be used to assist the Company in reaching its overall statutorily-mandated Demand Savings goal of 15% by the year 2015.
- p. The Company will provide information and or/reports on a monthly or as-needed basis, as determined by Staff) to Staff and DPA. Such reporting will include, but is not limited to:

- (1) Information regarding PJM capacity revenues;
- (2) Information regarding PJM energy market payments, if any, resulting from DR being called;
- (3) Information regarding any deficiency payments assessed against the Company for not responding, with deficiency payments broken down by type of payment, quantified in dollars;
- (4) The ongoing balance of monies paid out to customers versus monies collected from PJM;
- (5) The effect of customer migration and changes in customer baselines on the Program;
- (6) Information on the amount of customers participating in the CPR and their response levels during the critical event period of May through September; and
- (7) Any new information regarding Delmarva's activities regarding bidding of the Dynamic Pricing Demand Response Program into the PJM capacity markets.

-
- (8) Analysis of the result of PJM's base residual auctions and incremental auctions, including the effect of the auctions on monies available to reimburse responding customers.

Any additional reporting requirements resulting from the Phase I Assessment will be included in these monthly reports/status updates as appropriate. Delmarva will support all reasonable Staff requests for additional reports/information as more experience with the Program is gained.

- q. From the date of approval of the Program through the end of 2013, Delmarva will file semiannual reports with the Commission Staff detailing the steps taken and the progress made regarding its investigation into and integration of pre-paid metering. The Company will consider input from the Staff and DPA concerning a pre-paid metering program in its investigation. In addition, Staff, DPA, and the Company will conduct a minimum of one workshop per year to review the Company's pre-paid metering reports.

IV. ADDITIONAL PROVISIONS


9. The provisions of this Settlement are not severable.
10. This Settlement shall not be regarded as a precedent with respect to any ratemaking or any other principle in any future case. No Party to this settlement necessarily agrees or disagrees with the treatment of any particular item, any procedure followed, or the resolution of any particular

issue in agreeing to this settlement other than as specified herein and only as applicable to the treatment of this item for purposes of this Application, except that the Parties agree that the resolution of the issues herein taken as a whole results in just and reasonable rates.

11. To the extent opinions or views were expressed or issues were raised in the pre-filed testimony that are not specifically addressed in the Settlement, no findings, recommendations, or positions with respect to such opinions, views or issues should be implied or inferred.


AND SO, intending to bind themselves and their successors and assigns, the undersigned

Parties have caused this Proposed Settlement to be signed by their duly-authorized representatives.


Delmarva Power & Light Company

By: Todd A. Goodman
Print Name

Date: 12/8/2011


Delaware Public Service
Commission Staff

By: William O'Brien
Print Name

Date: 12/8/2011

Division of the Public Advocate

By: _____
Print Name

Date: _____

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AND SO, intending to bind themselves and their successors and assigns, the undersigned Parties have caused this Proposed Settlement to be signed by their duly-authorized representatives.

Delmarva Power & Light Company

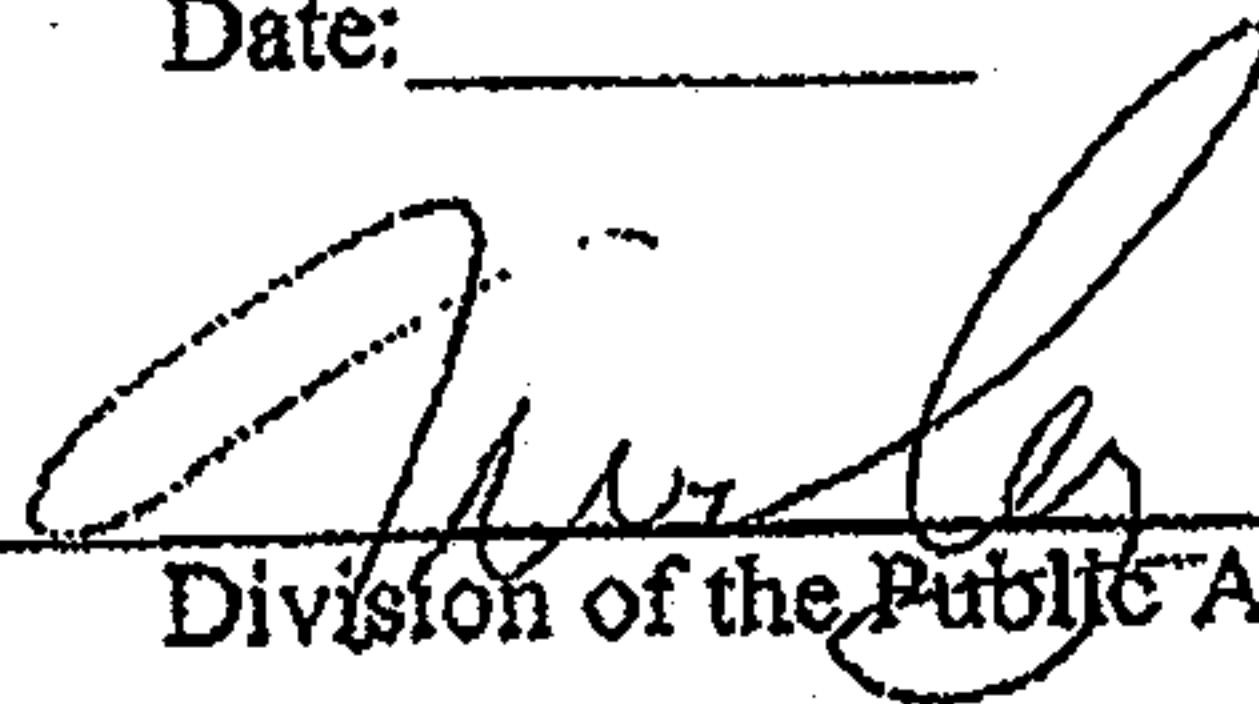
Delaware Public Service
Commission Staff

By: _____
Print Name

By: _____
Print Name

Date: _____

Date: _____



Division of the Public Advocate

By: M. Damien Sheehy
Print Name

Date: 12/13/11